

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

United States Patent and Trademark
Office
(Box PCT)
Crystal Plaza 2
Washington, DC 20231
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year)
23 March 1997 (23.03.97)

International application No.
PCT/US95/06620

Applicant's or agent's file reference
JP6-131165

International filing date (day/month/year)
24 May 1995 (24.05.95)

Priority date (day/month/year)

Applicant

YAMADA, Michiya et al

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:
23 December 1996 (23.12.96)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

D. Ybarra

Telephone No.: (41-22) 730.91.11

PATENT COOPERATION TREATY

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REC'D 26 SEP 1997

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

| | | |
|--|--|--|
| Applicant's or agent's file reference JP6-131165 | FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416) | |
| International application No. PCT/US95/06620 | International filing date (day/month/year) 24 MAY 1995 | Priority date (day/month/year) NONE |
| International Patent Classification (IPC) or national classification and IPC Please See Supplemental Sheet. | | |
| Applicant EXXON RESEARCH AND ENGINEERING COMPANY | | |

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.


2. This REPORT consists of a total of 4 sheets.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority. (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 0 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step or industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

| | |
|--|---|
| Date of submission of the demand 28 DECEMBER 1996 | Date of completion of this report 02 SEPTEMBER 1997 |
| Name and mailing address of the IPEA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230 | Authorized officer  MARGARET B. MEDLEY Telephone No. (703) 308-0661 |

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US95/06620

I. Basis of the report

1. This report has been drawn on the basis of *(Substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments):*

☒ the international application as originally filed.

☒ the description, pages 1-15 , as originally filed.

pages NONE , filed with the demand.

pages NONE , filed with the letter of _____.

pages _____ , filed with the letter of _____.

☒ the claims, Nos. 1-5 , as originally filed.

Nos. NONE , as amended under Article 19.

Nos. NONE , filed with the demand.

Nos. NONE , filed with the letter of _____.

Nos. _____ , filed with the letter of _____.

☒ the drawings, sheets/fig NONE , as originally filed.

sheets/fig NONE , filed with the demand.

sheets/fig NONE , filed with the letter of _____.

sheets/fig _____ , filed with the letter of _____.

2. The amendments have resulted in the cancellation of:

☒ the description, pages NONE .

☒ the claims, Nos. NONE .

☒ the drawings, sheets/fig NONE .

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the ~~Supplemental Box~~ Additional observations below (Rule 70.2(c)).

4. Additional observations, if necessary:

NONE

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US95/06620

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. STATEMENT

Novelty (N)

Claims 2 YES
Claims 1 AND 3-5 NO

Inventive Step (IS)

Claims NONE YES
Claims 1-5 NO

Industrial Applicability (IA)

Claims 1-5 YES
Claims NONE NO

2. CITATIONS AND EXPLANATIONS

Claims 1 and 3-5 lack novelty under PCT Article 33(2) as being anticipated by the patent to Igarashi et al. See column 3, lines 25 to column 4, lines 1-25.

Claims 1-5 lack an inventive step under PCT Article 33(3) as being obvious over Igarashi et al in view of Umemura et al, Rowan et al, Papay et al, Ward Jr, Farmer et al and LeSuer. Igarashi et al describe in column 3, lines 25 to column 4, lines 1-25 the lubricating oil composition claimed without the boron additive. To add the boron additive of LeSuer in column 2, lines 6-40 and column 21 lines 73 to col. 22 lines 1-64 to Igarashi et al lubricant oil composition would not involve an inventive step since Umemura et al in column 4, lines 3-end and column 5, lines 5-end; Rowman et al in column 1, lines 40-66 and column 3, lines 1-24; Papay et al in the entirety, Wards, Jr. in column 2, lines 37 to column 3, lines 1-20 and Tables I and II and Farmer et al in the abstract and column 1, lines 28-62 and claims teach Igarashi et al additives in a lubricating oil composition and provides for the inclusion and addition of the boron additive of LeSuer.

Claim 2 meet novelty under PCT Article 33(2) because none of the references of record teach a lubricating oil composition comprising additives consisting essentially as claimed in claim 2.

Claims 1-5 meet industrial applicability under PCT Article 33(4) because the subject matter claimed can be made or used in industry.

NEW CITATIONS

NONE

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US95/06620

Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of: Boxes I - VIII

~~Sheet 10~~

CLASSIFICATION:

The International Patent Classification (IPC) and/or the National classification are as listed below:

IPC(6): C10M 135/18 and US Cl.: 508/192,364,365

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US95/06620

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) : C10M 135/18

US CL : 252/42.7, 46.4, 47.5, 32.7E

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 252/32.7E, 42.7, 46.4, 47.5

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------------|---|-----------------------|
| X ----- Y | US,A, 5,281,347 (Igarashi et al) 25 January 1994, column 3, lines 25 to column 4, lines 1-25. | 1,3-5 ----- 2 |
| Y | US,A, 4,692,256 (Umemura et al) 08 September 1987, column 4, lines 3-end and column 5, lines 5-end. | 1-5 |
| Y | US,A, 4,360,438 (Rowan et al) 23 November 1982, column 1, lines 40-66 and column 3, lines 1-24. | 1-5 |
| Y | US,A, 3,509,051 (Farmer et al) 28 April 1970, abstract and column 1, lines 28-62 and claims. | 1-5 |



Further documents are listed in the continuation of Box C.



See patent family annex.

| | | | |
|--------------------------------------|---|--------------------------|--|
| * *A* *E* *L* *O* *P* | Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance earlier document published on or after the international filing date document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed | *T* *X* *Y* *A* | later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art document member of the same patent family |
|--------------------------------------|---|--------------------------|--|

Date of the actual completion of the international search

20 JULY 1995

Date of mailing of the international search report

23 AUG 1995

Name and mailing address of the ISA/US
Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Facsimile No. (703) 305-3230

Authorized officer

Margaret B. Medley

Telephone No. (703) 308-2518

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US95/06620

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
| Y | US,A, 4,178,258 (Papay et al) 11 December 1979 ALL. | 1-5 |
| Y | US,A, 3,254,025 (LeSuer) 31 May 1966, column 2, lines 6-40; column 21, lines 73 to column 1-64. | 2-5 |
| Y | US,A, 4,846,983 (Ward, Jr) 11 July 1989, column 1, lines 37 to column 2, lines 1-20 and Tables I and II. | 1-5 |



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TX 31651 epo nl
FAX (070) 3 40 30 16

Europäisches
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European
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Département à
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Patents and Licences,
Mailpoint 72,
Esso House,
Ermyrn Way
Leatherhead,
Surrey KT22 8XE
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no pending
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Datum/Date

07.05.99

Zeichen/Ref./Réf.

PCT/US95/06620

Anmeldung Nr./Application No./Demande n°/Patent Nr./Patent No./Brevet n°

95920657.4-1270-US9506620

Anmelder/Applicant/Demandeur/Patentinhaber/Proprietor/Titulaire

EXXON RESEARCH AND ENGINEERING COMPANY

COMMUNICATION

The European Patent Office herewith transmits as an enclosure the European search report for the above-mentioned European patent application.

If applicable, copies of the documents cited in the European search report are attached.

☒ Additional set(s) of copies of the documents cited in the European search report is (are) enclosed as well.

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|-------------|--|--|--|
| HAS | | | |
| SFW | | | |
| RWP | | | |
| COMP | | | |
| 10 MAY 1999 | | | |
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REFUND OF THE SEARCH FEE

If applicable under Article 10 Rules relating to fees, a separate communication from the Receiving Section on the refund of the search fee will be sent later.





European Patent
Office

**SUPPLEMENTARY
EUROPEAN SEARCH REPORT**

Application Number
EP 95 92 0657

| DOCUMENTS CONSIDERED TO BE RELEVANT | | | |
|---|---|---|---|
| Category | Citation of document with indication, where appropriate, of relevant passages | Relevant to claim | CLASSIFICATION OF THE APPLICATION (Int.Cl.6) |
| X/ | EP 0 562 172 A (IDEMITSU KOSAN CO) 29 September 1993 * page 2, line 50-58; claims 1,5 * * page 3, line 17-19; table 1 * | 1-5 | C10M141/10 C10M141/12 C10M163/00 /(C10M141/10, 129:54,133:56, 135:18, 137:10), (C10M163/00, 133:56,135:18, 137:10,139:00, 159:20), C10N10:04, 10:12,30:06, 40:04,40:08, 40:25,60:14 |
| E/ | WO 96 06904 A (TONEN CORP; EXXON RESEARCH ENGINEERING CO) 7 March 1996 * examples 1-9; table 1 * * page 5, line 19-24 * * page 12, line 29-32; claims 1,7 * | 1-5 | |
| | | | TECHNICAL FIELDS SEARCHED (Int.Cl.6) |
| | | | C10M |
| The supplementary search report has been based on the last set of claims valid and available at the start of the search. | | | |
| Place of search MUNICH | | Date of completion of the search 28 April 1999 | Examiner Kazemi, P |
| CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document | | | |

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 95 92 0657

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

28-04-1999

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---------------------|----------------------------|---------------------|
| EP 0562172 A | 29-09-1993 | JP 5163497 A | 29-06-1993 |
| | | CA 2085074 A | 13-06-1993 |
| | | DE 69228677 D | 22-04-1999 |
| | | US 5458807 A | 17-10-1995 |
| WO 9606904 A | 07-03-1996 | AU 3230695 A | 22-03-1996 |
| | | CA 2157425 A | 02-03-1996 |
| | | CA 2195475 A | 07-03-1996 |
| | | EP 0778876 A | 18-06-1997 |
| | | JP 8253785 A | 01-10-1996 |